(FILE 'HOME' ENTERED AT 11:37:55 ON 06 MAY 2002)

FILE 'BIOSIS, CAPLUS' ENTERED AT 11:39:44 ON 06 MAY 2002

FILE 'BIOSIS, CAPLUS, EMBASE, MEDLINE, CANCERLIT' ENTERED AT 11:40:40 ON 06 MAY 2002

L1 95 S (NUCLEIC ACID APTAMER)
L2 7 S L1 AND PCR
L3 7 DUPLICATE REMOVE L2 (0 DUPLICATES REMOVED)

3 ANSWER 7 OF 7 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1999:45260 BIOSIS
DN PREV199900045260
TI Automated RNA selection.
AU Cox, J. Colin; Rudolph, Peter; Ellington, Andrew D. (1)
CS (1) Dep. Chem., Univ. Texas Austin, Austin, TX 78712-1095 USA
SO Biotechnology Progress, (Nov.-Dec., 1998) Vol. 14, No. 6, pp. 845-850.
ISSN: 8756-7938.
DT Article
LA English
AB In vitro selection can be used to generate nucleic acid ligands (aptamers) to target molecules ranging in size and structure from cations to cells. However, the selection process is repetitive and time-consuming. We have automated a protocol for in vitro selection using an augmented Beckman Biomek 2000 pipetting robot. The automated selection procedure requires the integration of four devices and the optimization of four molecular biology methods, and is one of the most complex automated protocols attempted to date. Initial attempts at selection yielded robust replication parasites, but optimization of the automated selection procedure suppressed the emergence of these parasites and led to the selection of true nucleic acid ligands. Automated selection can now be used to generate **nucleic acid aptamers** in days rather than weeks or months.
CC Biochemical Methods - General *10050
Genetics and Cytogenetics - General *03502
Biochemical Studies - General *10060
IT Major Concepts
Equipment, Apparatus, Devices and Instrumentation; Methods and Techniques; Molecular Genetics (Biochemistry and Molecular Biophysics)
IT Chemicals & Biochemicals
double-stranded DNA: amplification, sequencing; AMV reverse transcriptase: Amersham Pharmacia Biotech; Display Taq: Promega; RNA: analysis, selection, transcription
IT Methods & Equipment
automated RNA selection: Analysis/Characterization Techniques: CB, analytical method; reverse transcription: molecular genetic method, molecular genetics/genetic engineering; Biomek 2000 pipetting robot: Beckman, laboratory equipment; DNA sequencing: Recombinant DNA Technology, sequencing techniques; Falcon 3911 Microtest III flexible assay microplates: Becton Dickinson, laboratory equipment; PTC-200 thermal cycler: laboratory equipment; RT-**PCR** [reverse transcriptase-polymerase chain reaction]: amplification method, polymerase chain reaction; Sequitherm Excel II DNA sequencing kit: Epicentre, laboratory equipment
RN 8016-13-5 (PROMEGA)

L3 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2002 ACS
AN 1999:804162 CAPLUS
DN 132:289280
TI A high throughput platform for systematic evolution of ligands by exponential enrichment (SELEX)
AU Drolet, D. W.; Jenison, R. D.; Smith, D. E.; Pratt, D.; Hicke, B. J.
CS Gilead Sciences, Inc., Boulder, CO, 80301, USA
SO Combinatorial Chemistry and High Throughput Screening (1999), 2(5), 271-278
CODEN: CCHSFU; ISSN: 1386-2073
PB Bentham Science Publishers
DT Journal
LA English
CC 3-1 (Biochemical Genetics)
AB The systematic evolution of ligands by exponential enrichment (SELEX) process is a combinatorial chem. method for the isolation of nucleic acid ligands (aptamers) that bind to a desired target mol. with high affinity. In order to increase throughput via automation, we have adapted the SELEX process for protein targets to a robotics-compatible microtiter plate format. A remarkable feature of the platform is that targets are immobilized by hydrophobic adsorption onto the plate surface. Hydrophobic immobilization procedures are simple and require no specialized modification of the protein target. This format was tested by manually performing four independent SELEX expts. All were concluded within 8 rounds of selection and yielded aptamers that bind in soln. to their resp. protein target, calf intestinal alk. phosphatase, human .alpha.-thrombin or human platelet derived growth factor, with equil. dissocn. consts. below 3.times.10-10 M.
ST SELEX **PCR** combinatorial aptamer isolation; throughput platform systematic evolution ligand exponential enrichment SELEX
IT Genetic methods
(SELEX; a high throughput platform for systematic evolution of ligands by exponential enrichment (SELEX))
IT **PCR** (polymerase chain reaction)
(a high throughput platform for systematic evolution of ligands by exponential enrichment (SELEX))
IT Platelet-derived growth factors
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(aptamers that bind to; a high throughput platform for systematic evolution of ligands by exponential enrichment (SELEX))
IT Combinatorial chemistry
(high throughput platform for systematic evolution of ligands by exponential enrichment (SELEX))
IT Ligands
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(**nucleic acid** (**aptamers**); a high throughput platform for systematic evolution of ligands by exponential enrichment (SELEX))
IT 9001-78-9
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(calf intestinal, aptamers that bind; a high throughput platform for systematic evolution of ligands by exponential enrichment (SELEX))
IT 9002-04-4, Thrombin
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(.alpha., aptamers that bind; a high throughput platform for systematic evolution of ligands by exponential enrichment (SELEX))
RE.CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
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(3) Bridonneau, P; J Chromatogr B 1999, V726, P237 CAPLUS
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(5) Ellington, A; Nature 1990, V346, P818 CAPLUS
(6) Fitzwater, T; Methods Enzymol 1996, V267, P275 CAPLUS
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(10) Hicke, B; J Clin Invest 1996, V8, P2688